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Linked cyclopentadienyl-amide complexes of divalent, trivalent, and tetravalent vanadium: A vanadium "constrained geometry catalyst"

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V	-C(4)	2.2964(16)	C(6)	-C(7)	1.524(3)
V	-C(5)	2.2865(13)	C(8)	-C(9)	1.521(2)
N	-C(7)	1.4700(18)	C(8)	-C(10)	1.523(2)
N	-C(8)	1.488(2)			

Bond angles (deg.) in 4:

Cl(1)	-V	-Cl(2)	95.61(2)	C(4)	-V	-C(5)	36.06(5)
Cl(1)	-V	-N	107.45(4)	V	-N	-C(7)	129.97(11)
Cl(1)	-V	-C(1)	146.11(5)	V	-N	-C(8)	112.61(8)
Cl(1)	-V	-C(2)	110.17(4)	C(7)	-N	-C(8)	117.02(12)
Cl(1)	-V	-C(3)	88.42(4)	V	-C(1)	-C(2)	70.85(9)
Cl(1)	-V	-C(4)	102.77(4)	V	-C(1)	-C(5)	72.63(9)
Cl(1)	-V	-C(5)	138.58(4)	C(2)	-C(1)	-C(5)	107.75(14)
Cl(2)	-V	-N	105.33(4)	V	-C(2)	-C(1)	72.72(10)
Cl(2)	-V	-C(1)	94.24(4)	V	-C(2)	-C(3)	73.05(10)
Cl(2)	-V	-C(2)	95.73(4)	C(1)	-C(2)	-C(3)	108.14(14)
Cl(2)	-V	-C(3)	127.85(4)	V	-C(3)	-C(2)	70.65(10)
Cl(2)	-V	-C(4)	153.49(4)	V	-C(3)	-C(4)	72.94(10)
Cl(2)	-V	-C(5)	124.42(4)	C(2)	-C(3)	-C(4)	108.18(14)
N	-V	-C(1)	101.00(6)	V	-C(4)	-C(3)	71.41(9)
N	-V	-C(2)	134.41(5)	V	-C(4)	-C(5)	71.59(8)
N	-V	-C(3)	122.88(5)	C(3)	-C(4)	-C(5)	108.01(14)
N	-V	-C(4)	87.33(5)	V	-C(5)	-C(1)	71.36(8)
N	-V	-C(5)	74.47(5)	V	-C(5)	-C(4)	72.35(8)
C(1)	-V	-C(2)	36.43(6)	V	-C(5)	-C(6)	111.6(1)
C(1)	-V	-C(3)	60.32(6)	C(1)	-C(5)	-C(4)	107.90(13)
C(1)	-V	-C(4)	60.07(6)	C(1)	-C(5)	-C(6)	125.50(14)
C(1)	-V	-C(5)	36.02(6)	C(4)	-C(5)	-C(6)	125.24(14)
C(2)	-V	-C(3)	36.31(6)	C(5)	-C(6)	-C(7)	106.67(13)
C(2)	-V	-C(4)	60.11(6)	N	-C(7)	-C(6)	107.10(13)
C(2)	-V	-C(5)	60.35(6)	N	-C(8)	-C(9)	110.71(12)
C(3)	-V	-C(4)	35.65(6)	N	-C(8)	-C(10)	110.95(12)
C(3)	-V	-C(5)	59.97(5)	C(9)	-C(8)	-C(10)	113.05(14)

